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=> d his

       (FILE 'HOME' ENTERED AT 11:08:24 ON 02 APR 2006)

       FILE 'INSPEC, COMPENDEX' ENTERED AT 11:10:13 ON 02 APR 2006
L1       1673 S (LINK OR HYPERLINK?) AND HEURISTIC
L2          2 S L1 AND COMMAND
L3         18 S ((LINK OR HYPERLINK?) AND HEURISTIC)/TI
L4          8 S DOCUMENT AND (LINK OR HYPERLINK?) AND HEURISTIC
L5          3 S DOCUMENT AND (BROWSE? OR NAVIGAT?) AND (LINK OR HYPERLINK?) A

=>
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Welcome to STN International! Enter x:x

LOGINID:ssspta2309sxs

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * *   Welcome to STN International   * * * * * * * * * *

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NEWS  1            Web Page URLs for STN Seminar Schedule - N. America
NEWS  2            "Ask CAS" for self-help around the clock
NEWS  3   DEC 21   IPC search and display fields enhanced in CA/CAplus with the
                   IPC reform
NEWS  4   DEC 23   New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/
                   USPAT2
NEWS  5   JAN 13   IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
NEWS  6   JAN 13   New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to
                   INPADOC
NEWS  7   JAN 17   Pre-1988 INPI data added to MARPAT
NEWS  8   JAN 17   IPC 8 in the WPI family of databases including WPIFV
NEWS  9   JAN 30   Saved answer limit increased
NEWS 10   JAN 31   Monthly current-awareness alert (SDI) frequency
                   added to TULSA
NEWS 11   FEB 21   STN AnaVist, Version 1.1, lets you share your STN AnaVist
                   visualization results
NEWS 12   FEB 22   Status of current WO (PCT) information on STN
NEWS 13   FEB 22   The IPC thesaurus added to additional patent databases on STN
NEWS 14   FEB 22   Updates in EPFULL; IPC 8 enhancements added
NEWS 15   FEB 27   New STN AnaVist pricing effective March 1, 2006
NEWS 16   FEB 28   MEDLINE/LMEDLINE reload improves functionality
NEWS 17   FEB 28   TOXCENTER reloaded with enhancements
NEWS 18   FEB 28   REGISTRY/ZREGISTRY enhanced with more experimental spectral
                   property data
NEWS 19   MAR 01   INSPEC reloaded and enhanced
NEWS 20   MAR 03   Updates in PATDPA; addition of IPC 8 data without attributes
NEWS 21   MAR 08   X.25 communication option no longer available after June 2006
NEWS 22   MAR 22   EMBASE is now updated on a daily basis

NEWS EXPRESS   FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
               V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
               http://download.cas.org/express/v8.0-Discover/

NEWS HOURS    STN Operating Hours Plus Help Desk Availability
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Enter NEWS followed by the item number or name to see news on that
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FILE 'HOME' ENTERED AT 11:08:24 ON 02 APR 2006

=> file inspec, compendex
COST IN U.S. DOLLARS   SINCE FILE   TOTAL

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=> s (link or hyperlink) and heristic
) IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s (link or hyperlink?) and heuristic
L1        1673 (LINK OR HYPERLINK?) AND HEURISTIC

=> s l1 and command
L2           2 L1 AND COMMAND

=> d 1-2 ti, ab
```

L2   ANSWER 1 OF 2 · INSPEC   (C) 2006 IET on STN
TI   Tactical data **link** planning technique
AB   The tactical data **link** system is a communication, navigation
       and identification system intended to exchange surveillance and C2 (
       command and control) information among various C2 platforms and
       weapon platforms to enhance the varied missions of each of the services.
       The tactical data **link** terminals operate in the 960 - 1215 MHz
       band, which is reserved on a worldwide basis for the safe operation of
       aeronautical radionavigation equipment. The tactical data **link**
       system must be planned and modelled on the condition of some specific
       restrictions or limitations during operations. A **heuristic**
       algorithm is described

L2   ANSWER 2 OF 2 COMPENDEX COPYRIGHT 2006 EEI on STN
TI   New path metric for survivable circuit switched routing.
AB   The authors report a novel path metric for survivable circuit-switched
       routing.The distribution of physical assets in the network is assumed
       flat, and the network operates in a stressed environment with **link**
       and node failures.In addition, the traffic distribution is arbitrary as a
       function of space and time.The fundamental assumption driving this work is
       that 'delay,' both processing delay at a node and propagation delay, is
       insignificant to the degree that from a delay-only viewpoint, the total
       number of hops that comprise the path of the circuit is unimportant.A
       heuristic that attempts to completely avoid using capacity into or
       out of a node and generally defers blocking calls as long as possible is
       used.Three metrics have been studied: the shortest number of hops without
       regard for **link** utilization, the shortest number of hops
       considering links that have unused capacity, and a nonlinear
       utilization-sensitive metric.The performance under a variety of network
       conditions, such as equal- and unequal-capacity links, uniform and
       nonuniform traffic matrices, and ring, cube, and ADI-like air defense
       topologies, has been studied.Both transient and steady-state call-blocking
       performance has been obtained for the above **link** metrics with
       both a centralized router and a distributed routing algorithm, and an
       associated topology update strategy.

```
=> s ((link or hyperlink?) and heuristic)/ti
```

```
L3          18 ((LINK OR HYPERLINK?) AND HEURISTIC)/TI

=> d 1-18 ti

L3     ANSWER 1 OF 18  INSPEC  (C) 2006 IET on STN
TI     Animating 9-**link** brachiation with **heuristic** control

L3     ANSWER 2 OF 18  INSPEC  (C) 2006 IET on STN
TI     A fast **heuristic** for genetic algorithms in **link**
       weight optimization

L3     ANSWER 3 OF 18  INSPEC  (C) 2006 IET on STN
TI     A **heuristic** algorithm for **link** scheduling problems in
       packet radio networks

L3     ANSWER 4 OF 18  INSPEC  (C) 2006 IET on STN
TI     Improvement of QoS using **heuristic** approach for satellite
       **link** expansion

L3     ANSWER 5 OF 18  INSPEC  (C) 2006 IET on STN
TI     **Heuristic** solutions for satellite **link** expansion

L3     ANSWER 6 OF 18  INSPEC  (C) 2006 IET on STN
TI     A **heuristic** approach to satellite **link** capacity
       planning applied in mobile networks

L3     ANSWER 7 OF 18  INSPEC  (C) 2006 IET on STN
TI     Finding combined L1 and **link** metric shortest paths in the
       presence of orthogonal obstacles: a **heuristic** approach

L3     ANSWER 8 OF 18  INSPEC  (C) 2006 IET on STN
TI     **Heuristic** approach to dynamic motion planning for multi-
       **link** planar manipulators in a sparse, time varying environment

L3     ANSWER 9 OF 18  INSPEC  (C) 2006 IET on STN
TI     **Heuristic** technique for processor and **link** assignment
       in multicomputers

L3     ANSWER 10 OF 18  INSPEC  (C) 2006 IET on STN
TI     A **heuristic** method of **link** reliability assignment for
       maximal reliability

L3     ANSWER 11 OF 18  INSPEC  (C) 2006 IET on STN
TI     **Heuristic** modeling: the missing or moot **link** to
       horizontal decision support systems

L3     ANSWER 12 OF 18  INSPEC  (C) 2006 IET on STN
TI     A nonlinear programming **heuristic** for computing optimal
       **link** capacities in a multihour alternate routing communications
       network

L3     ANSWER 13 OF 18  COMPENDEX  COPYRIGHT 2006 EEI on STN
TI     **Heuristic** solutions for satellite **link** expansion.

L3     ANSWER 14 OF 18  COMPENDEX  COPYRIGHT 2006 EEI on STN
TI     Finding combined L1 and **link** metric shortest paths in the
       presence of orthogonal obstacles: A **heuristic** approach.

L3     ANSWER 15 OF 18  COMPENDEX  COPYRIGHT 2006 EEI on STN
TI     **Heuristic** approach to dynamic motion planning for multi-
       **link** planar manipulators in a Sparse, time varying environment.

L3     ANSWER 16 OF 18  COMPENDEX  COPYRIGHT 2006 EEI on STN
TI     **Heuristic** technique for processor and **link** assignment
```

in multicomputers.

TI   **Heuristic** method of **link** reliability assignment for
maximal reliability.

TI   NONLINEAR PROGRAMMING **HEURISTIC** FOR COMPUTING OPTIMAL
LINK CAPACITIES IN A MULTI-HOUR ALTERNATE ROUTING COMMUNICATIONS
NETWORK.

=> d ab 1-12

AB   Brachiation is an extremely unstable and under-actuated system. This
paper explores a physically-based animation system, a heuristic control,
on a complex nine-link model to animate brachiation. The heuristic
control contains three schemes, namely phase heuristic control,
final-target heuristic control and phase-final-target heuristic control.
The effectiveness of the three heuristic control paradigms has been
exemplified. Experimental results have demonstrated that the
phase-final-target heuristic control would be a more sophisticated
decision for generating convincing brachiation animation

AB   Genetic algorithms are a useful tool for link weight optimization in
intradomain traffic engineering where the maximum link load is to be
minimized. As a local heuristic, the weight of the maximum loaded link is
increased to speed up the search for a near-optimal solution. We show
that implementing this heuristic as directed mutation outperforms an
implementation as an inner loop in both quality of the result and number
of calls to the objective function when used together with caching.
Optimal mutation rates result in surprisingly high cache hit ratios

AB   In a packet radio network such as an ad-hoc network and a large scale
communication network, packets are transmitted from source nodes to
destinations by going through several nodes on routes connecting them,
because each node usually does not have a direct link to every node in
the network. To maximize the usability in the network, the problems of
selecting a transmission route for each connection request and of
scheduling the link activations such that the total transmission time is
minimized, must be solved. This paper presents a four-stage heuristic
algorithm for the link scheduling problem (LSP) in a packet radio
network, called MIPS-LSP, a Minimal-state Processing Search algorithm for
LSP. It is assumed that every link activation in the network is
synchronously controlled by a single clock with a fixed time interval
called a time slot. The first stage generates a link compatibility graph
to represent the conflicts between links when activated at the same time
slot. The second stage of MIPS-LSP computes the lower bound on the number
of time slots for a given LSP instance. The third stage gives the initial
state for search by a greedy method. The last stage iteratively searches
a solution by a minimal-state evolution method. The performance of the
algorithm is verified through extensive simulations using instances with
up to 1,000 nodes

AB   At first the heuristic algorithm for optimal sizing of N satellite
capacity types (on LES side of link) is compared with algorithm based on
exact approach. In all numerical test-examples for mobile network with
predicted traffic demands the best possible result is achieved. After
that the heuristic is tested through the same test-examples as before,
but using various limitations for capacity state values. Only if we apply

adequate heuristic approach we can ensure both, significant improvement
of QoS (Quality of Service) for capacity availability and minimal
capacity expansion cost. It means that our heuristic approach can be
successfully applied to short-term or medium-term satellite network
planning with finite number of discrete time periods

L3   ANSWER 5 OF 18 INSPEC (C) 2006 IET on STN
AB   First, the heuristic algorithm for optimal sizing of N satellite capacity
types, on the LES (land Earth station) side of the link, is compared with
an algorithm based on an exact approach. In all numerical test-examples
for a mobile network with predicted traffic demands, the best possible
result is achieved. Next, we test some heuristic options using various
limitations for capacity state values. Only if we apply an adequate
heuristic option can we ensure both significant improvement of QoS
(quality of service) for capacity availability and minimal capacity
expansion cost. It means that our heuristic approach can be successfully
applied to short-term or medium-term satellite network planning with a
finite number of discrete time periods

L3   ANSWER 6 OF 18 INSPEC (C) 2006 IET on STN
AB   Taking into account the continuous increase of traffic demands, it is
necessary to increase satellite link capacity rationally. An efficient
algorithm for sizing of N satellite links in mobile networks during
exploitation is being developed, minimizing the total expansion cost.
Capacity shortages are allowed so the problem is denoted as CEPS
(Capacity Expansion Problem with Shortages). Using a network flow
approach, the paper develops all possible expansion solutions for SPEP
(Single Period Expansion Problem) and properties of extreme point
solution are identified. The extreme flow theory enables separation of
these extreme flows which can be a part of an optimal expansion solution
from those which cannot. Such a heuristic approach enables the optimal
result, using significantly less effort in programming and algorithm
development. Our heuristic algorithm is compared with an algorithm based
on an exact approach through many numerical examples. It is obvious that
it is very effective, providing an optimal result with reasonable effort.
The algorithm can be applied to short- or medium-term satellite network
planning with a finite number of discrete time periods

L3   ANSWER 7 OF 18 INSPEC (C) 2006 IET on STN
AB   This paper presents new heuristic search algorithms for searching
combined rectilinear (L1) and link metric shortest paths in the presence
of orthogonal obstacles. The Guided Minimum Detour (GMD) algorithm for L1
metric combines the best features of maze-running algorithms and
line-search algorithms. The Line-by-Line Guided Minimum Detour (LGMD)
algorithm for L1 metric is a modification of the GMD algorithm that
improves on efficiency using line-by-line extensions. Our GMD and LGMD
algorithms always find a rectilinear shortest path using the guided A*
search method without constructing a connection graph that contains
shortest paths; the GMD and the LGMD algorithms can be implemented in
$O(m+e \log e+N \log N)$ and $O(e \log e+N \log N)$ time, respectively, and
$o(e+N)$ space, where m is the total number of searched nodes, e is the
number of boundary sides of obstacles, and N is the total number of
searched line segments. Based on the LGMD algorithm, we consider not only
the problems of finding a link metric shortest path in terms of the
number of bends, but also the combined L1 metric and link metric shortest
path in terms of the length and the number of bends

L3   ANSWER 8 OF 18 INSPEC (C) 2006 IET on STN
AB   In this paper a fast and simple method to solve the motion planning
problem for planar manipulators is suggested. This method is based on the
development of a set of simple reactive behaviours, which allow the robot
to move through a time-varying workspace. These simple reactive
behaviours are activated by each link of the robot in response to the
sensory information experienced as the robot moves through its workspace

in search of its goal. As a consequence of the robot's behaviours being reactive, the influence of obstacles on the robot's path is only local. However, there is a subset of problems for which sequential movement of links fails to guide the robot to its goal. This constitutes what we describe as a local minima problem. This problem has been solved by producing a behaviour which identifies local minima and defines an intermediate goal for the robot, in order to guide it out of the local minima. Results are given in the paper which illustrate the performance of this planner

L3   ANSWER 9 OF 18   INSPEC   (C) 2006 IET on STN
AB   A graph-based solution to the mapping problem using the simulated annealing optimization heuristic is developed. An automated two-phase mapping strategy is formulated: process annealing assigns parallel processes to processing nodes, and connection annealing schedules traffic connections on network data links so that interprocess communication conflicts are minimized. To evaluate the quality of generated mappings. cost functions suitable for simulated annealing that accurately quantify communications overhead are derived. Communication efficiency is formulated to measure the quality of assignments when the optimal mapping is unknown. The mapping scheme is implemented using the hypercube as a host architecture, and results for several image graphs are presented

L3   ANSWER 10 OF 18   INSPEC   (C) 2006 IET on STN
AB   Link reliability assignment is the problem of determining the reliability values to be assigned to the various links of a given network from a given set of link reliability values in order to achieve maximum reliability for the given network. Reliability to be maximized may be the s-t reliability or global reliability. The methods available for assigning reliability values to various links require the knowledge of the network reliability function and its several evaluations. The proposed method, which is heuristic in nature, does not require the reliability function and its evaluations; it only needs the network s-t paths (or trees for global reliability). Frequencies of occurrence of various links in paths of different cardinalities (or trees for global reliability) are found. An index, termed the importance index, which is a function of frequency of occurrence, number of paths and cardinalities of paths, is defined and determined for each link. Links are assigned reliability values in the same order as the order of importance index values. The proposed criterion has been tried on several networks. The network reliability obtained is maximal

L3   ANSWER 11 OF 18   INSPEC   (C) 2006 IET on STN
AB   Attempts to increase the strength and role of DSS models through heuristic guidance or intelligence capabilities, are appropriate to horizontal decision support systems. Interaction between end-users and the DSS built to solve semistructured problems using paradigms designed by human experts may be the key strength of such systems. It often leads to users becoming more actively involved in the computer-based problem-solving process. At the same time, computational analysis of data still remains a prime purpose for most organizations using computers. Thus, a blending of computational and heuristic modeling techniques may be the most appropriate focus for horizontal DSS creation efforts

L3   ANSWER 12 OF 18   INSPEC   (C) 2006 IET on STN
AB   Concerns the problem of determining the optimal number of communications channels in a telecommunications network. Traffic between pairs of nodes is assumed to vary with the time of day. Traffic between two nodes can flow over a one-link direct path or, if no direct channels are available, over a two-link alternate route. The problem is to compute the optimal number of channels on each link to minimize cost, subject to a constraint that enough trunks are present so that the probability of no idle channel does not exceed a specified amount. The mathematical formulation of this problem, known as the multihour engineering problem, yields an integer

nonlinear programming problem (NLP). Recursive quadratic programming, with exact penalty functions (EPF) line searches, is applied to solve the continuous NLP, and the special problem structure is used to provide a starting point and EPF parameter. A simple heuristic is used to obtain an integral number of channels satisfying desired blocking objectives. The method successfully solved a set of randomly generated test problems with up to 35 variables and 432 nonlinear constraints

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    FILE 'INSPEC, COMPENDEX' ENTERED AT 11:10:13 ON 02 APR 2006
L1        1673 S (LINK OR HYPERLINK?) AND HEURISTIC
L2           2 S L1 AND COMMAND
L3          18 S ((LINK OR HYPERLINK?) AND HEURISTIC)/TI

=> s document and (link or hyperlink?) and heuristic
L4           8 DOCUMENT AND (LINK OR HYPERLINK?) AND HEURISTIC

=> d 1-8 ti ab
```

L4   ANSWER 1 OF 8   INSPEC   (C) 2006 IET on STN
TI   Design and performance analysis of multimedia **document**
      retrieval strategies for networked video-on-reservation systems
AB   Video-on-reservation (VOR) systems serve as an attractive service
      providing scheme for multimedia network based services. As opposed to
      on-demand systems, in VOR, requests arrive in advance to their viewing
      times so that the network resources can be better utilized by carefully
      scheduling the resources. In this paper, we address the problem of
      optimizing the per user service cost and maximizing the number of
      requests that can be served by VOR systems. In order to provide a
      guaranteed QoS, generation of multicast trees with end-to-end delay
      constraints is recommended to minimize the costs. Since such an issue has
      been proved to be NP-complete, we propose two efficient and practically
      realizable **heuristic** algorithms, referred to as Source-Based
      Stream Scheduling (SBS) algorithm and Destination-Based Stream Scheduling
      (DBS) algorithm to solve the problem in polynomial time. Both SBS and DBS
      algorithms judiciously combine the concept of multicast routing and
      network caching, so that the copies of multimedia documents (MMDs) can be
      dynamically cached in the network. To analyze the trade-off between
      caching cost and transmission cost, we present a mathematical model and
      show that service cost can be minimized by adjusting offset time
      according to the network characteristics. When network resources (cache
      space and **link** bandwidth) are constraints, acceptance ratio can
      be improved significantly by combining video partitioning with SBS or
      DBS. We analyze and quantify the performance under several influencing
      parameters such as **link** availability, cache capacity and MMD
      availability. Our simulation results conclusively show that all the
      proposed algorithms can reduce the service cost, balance the network load
      and achieve a high acceptance ratio. [All rights reserved Elsevier]

L4   ANSWER 2 OF 8   INSPEC   (C) 2006 IET on STN
TI   An efficient algorithm for designing optimal backbone topology for a
      communication networks
AB   In this paper, we present an algorithm to design an optimal backbone
      network topology, which incorporates some real life constraints of
      reliability. A network topology is a 1-FT topology if it can survive a
      single **link** failure. The problem a designer of a network faces
      is how to find a reliable network topology for a set of nodes with
      reduced total **link** cost. The problem is known to be NP-hard
      i.e. there exists no polynomial time algorithms to solve this problem.
      Thus, the problem can be formulated as combinatorial optimization

problem. Our algorithm, a variant of enumerative technique, tries to find
out a 1-FT network topology with optimal total **link** cost when
runs to its termination. The time complexity of our algorithm is O(N4).
We have tested our algorithm for a wide range of data set and compared
the outcome with the existing approach based on genetic algorithm (GA)
and found that our algorithm outperforms the GA based approach in
producing quality solution. This electronic **document** is a
'live' template. The various components of your paper [title, text,
heads, etc.] are already defined on the style sheet, as illustrated by
the portions given in this **document**

L4   ANSWER 3 OF 8 INSPEC (C) 2006 IET on STN
TI   Conceptualizing documentation on the Web: an evaluation of different
      heuristic-based models for counting links between university Web
      sites
AB   All known previous Web **link** studies have used the Web page as
      the primary indivisible source **document** for counting purposes.
      Arguments are presented to explain why this is not necessarily optimal
      and why other alternatives have the potential to produce better results.
      This is despite the fact that individual Web files are often the only
      choice if search engines are used for raw data and are the easiest basic
      Web unit to identify. The central issue is of defining the Web '
      document': that which should comprise the single indissoluble
      unit of coherent material. Three alternative heuristics are defined for
      the educational arena based upon the directory, the domain and the whole
      university site. These are then compared by implementing them on a set of
      108 UK university institutional Web sites under the assumption that a
      more effective **heuristic** will tend to produce results that
      correlate more highly with institutional research productivity. It was
      discovered that the domain and directory models were able to successfully
      reduce the impact of anomalous linking behavior between pairs of Web
      sites, with the latter being the method of choice. Reasons are then given
      as to why a **document** model on its own cannot eliminate all
      anomalies in Web linking behavior. Finally, the results from all models
      give a clear confirmation of the very strong association between the
      research productivity of a UK university and the number of incoming links
      from its peers' Web sites

L4   ANSWER 4 OF 8 INSPEC (C) 2006 IET on STN
TI   Helping the user to select a **link**
AB   Links are among the distinguishing features of hypermedia and much
      research resolves around them. The authors survey issues related to links
      and address the problem of presenting links in such a way that the user
      can choose the most appropriate links. This issue is particularly
      important when a large number of links is available, a subject that has
      not received much attention yet but will become important as hypermedia
      document bases grow. They show that presentation of links can be
      dealt with by filtering out links that are not of interest to the user
      and by ranking the remaining nodes to simplify choice. After listing
      several **heuristic** approaches, they propose a method based on
      two quantitative measures of knowledge. This method can be used for
      rigorous numeric ranking of links on the basis of their contribution to
      the user's total knowledge

L4   ANSWER 5 OF 8 COMPENDEX COPYRIGHT 2006 EEI on STN
TI   Design and performance analysis of multimedia **document** retrieval
      strategies for networked Video-on-Reservation systems.
AB   Video-on-Reservation (VOR) systems serve as an attractive service
      providing scheme for multimedia network based services. As opposed to
      on-demand systems, in VOR, requests arrive in advance to their viewing
      times so that the network resources can be better utilized by carefully
      scheduling the resources. In this paper, we address the problem of
      optimizing the per user service cost and maximizing the number of requests
      that can be served by VOR systems. In order to provide a guaranteed QoS,

generation of multicast trees with end-to-end delay constraints is recommended to minimize the costs. Since such an issue has been proved to be NP-complete, we propose two efficient and practically realizable **heuristic** algorithms, referred to as Source-Based Stream Scheduling (SBS) algorithm and Destination-Based Stream Scheduling (DBS) algorithm to solve the problem in polynomial time. Both SBS and DBS algorithms judiciously combine the concept of multicast routing and network caching, so that the copies of Multimedia Documents (MMDs) can be dynamically cached in the network. To analyze the trade-off between caching cost and transmission cost, we present a mathematical model and show that service cost can be minimized by adjusting offset time according to the network characteristics. When network resources (cache space and **link** bandwidth) are constraints, acceptance ratio can be improved significantly by combining video partitioning with SBS or DBS. We analyze and quantify the performance under several influencing parameters such as **link** availability, cache capacity and MMD availability. Our simulation results conclusively show that all the proposed algorithms can reduce the service cost, balance the network load and achieve a high acceptance ratio. $CPY 2005 Elsevier B.V. All rights reserved. 23 Refs.

L4   ANSWER 6 OF 8 COMPENDEX COPYRIGHT 2006 EEI on STN
TI   Web Search by Feedback Learning.
AB   There has been a paradigm shift in web searching from the content based searching to the connectivity based or more commonly known as **hyperlink** based (or simply **link** based) searching. But, both the content based as well as the **link** based approaches are totally dependent on the effectiveness of their "feature extraction" mechanisms, with no direct consideration to the preference of the user. In this work, a "user satisfaction" guided web search procedure is proposed. We calculate the importance weight of each **document** viewed by the user based on the feedback vector obtained from his actions. This **document** weight is then used to update the index database in such a way that the documents being consistently preferred go up the ranking, while the once being neglected go down. Our simulation results show a steady rise in the satisfaction levels of the modeled users as more and more learning goes into our system. One of the advantages of our technique of web search by feedback learning is that the performance of the search engine is no more dependent on the effectiveness of the **heuristic** used for characterization of the documents. Rather we go by "what the user wants" as our guideline. The second advantage is that our technique is equally valid for all types of data repositories – text documents, images, audio and video data, binary files and so on. This way we achieve higher search quality with data diversity. 13 Refs.

L4   ANSWER 7 OF 8 COMPENDEX COPYRIGHT 2006 EEI on STN
TI   Conceptualizing documentation on the Web: An evaluation of different **heuristic**-based models for counting links between university web sites.
AB   All known previous Web **link** studies have used the Web page as the primary indivisible source **document** for counting purposes. Arguments are presented to explain why this is not necessarily optimal and why other alternatives have the potential to produce better results. This is despite the fact that individual Web files are often the only choice if search engines are used for raw data and are the easiest basic Web unit to identify. The central issue is of defining the Web **"document"**: that which should comprise the single indissoluble unit of coherent material. Three alternative heuristics are defined for the educational arena based upon the directory, the domain and the whole university site. These are then compared by implementing them on a set of 108 UK university institutional Web sites under the assumption that a more effective **heuristic** will tend to produce results that correlate more highly with institutional research productivity. It was discovered that the domain and directory models were able to successfully reduce the impact of anomalous linking behavior between pairs of Web sites, with the latter

being the method of choice. Reasons are then given as to why a
document model on its own cannot eliminate all anomalies in Web
linking behavior. Finally, the results from all models give a clear
confirmation of the very strong association between the research
productivity of a UK university and the number of incoming links from its
peers' Web sites. 47 Refs.

L4   ANSWER 8 OF 8 COMPENDEX COPYRIGHT 2006 EEI on STN
TI   2001 International database engineering & applications symposium.
AB   The proceedings contains 39 papers from the 2001 International Database
     Engineering & Applications Symposium. The topics discussed include: query
     scheduling in muli query optimization; Web **document** searching
     using enhanced **hyperlink** semantics; design and implementation of
     Bitmap inices for scientific data; generation of external schemas in
     databases; static analysis of queries as a tool for static optimisation;
     algorithms for computing medians and other quantiles of disk-resident
     data; a data preparation framework based on a multidatabase language;
     virtual integration of temporal and conflicting information and
     cryptography and relational database management systems.(Edited abstract)

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     FILE 'INSPEC, COMPENDEX' ENTERED AT 11:10:13 ON 02 APR 2006
L1   1673 S (LINK OR HYPERLINK?) AND HEURISTIC
L2   2 S L1 AND COMMAND
L3   18 S ((LINK OR HYPERLINK?) AND HEURISTIC)/TI
L4   8 S DOCUMENT AND (LINK OR HYPERLINK?) AND HEURISTIC

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L5   3 DOCUMENT AND (BROWSE? OR NAVIGAT?) AND (LINK OR HYPERLINK?) AND
             COMMAND

=> d 1-3 ti, ab

L5   ANSWER 1 OF 3 INSPEC (C) 2006 IET on STN
TI   Integrating framework for application programs with network services
     using a Web **browser**
AB   A simple and general framework for integrating application programs with
     control through a local Web **browser** is described. Based on our
     simple inter-process message function, application programs are driven
     from an external process by means of **command** messages, which
     can also be prepared in a script file. A message dispatcher program sends
     these messages to the target application as a helper application to a Web
     browser when the user clicks on a **hyperlink** in the
     associated Web **document**. Our method also serves as a pluggable
     extension module for an application program by dynamic linking. A
     prototype system was implemented on our molecular structure viewer
     program, MOSBY, which successfully featured an extension module for the
     docking study of molecular fragments from a Web site. Our method is also
     applicable for wide range of network computations for private data
     processing using a Web **browser**

L5   ANSWER 2 OF 3 INSPEC (C) 2006 IET on STN
TI   Delivering instruction on the World Wide Web: overview and basic design
AB   Development of the Internet has started a revolution in communication
     that is providing new opportunities for delivering instruction. The
     Internet began as communication links among computer facilities and
     departments, accessible only to those comfortable with **command**
     line language. It became user-friendly with the development of
     hyperlinking on the World Wide Web, enabling one **document**
     to contain pointers to and from many others. Web **browsers** were

soon developed that supported display of high quality images, animation, videos, and audio. These graphical **browsers** opened the door to delivery of multimedia anywhere in the world. The paper presents a brief history of the Internet and the Web, describes benefits and disadvantages of the Web for instructional programs, and provides some basic WWW design recommendations, along with basic technical information useful in instructional design for Web-based learning

L5   ANSWER 3 OF 3 COMPENDEX COPYRIGHT 2006 EEI on STN
TI   Integrating framework for application programs with network services using a Web **Browser**.
AB   A simple and general framework for integrating application programs with control through a local Web **browser** is described. Based on our simple inter-process message function, application programs are driven from an external process by means of **command** messages, which can also be prepared in a script file. A message dispatcher program sends these messages to the target application as a helper-application to a Web **Browser** by clicking a hyper-**link** in the associated Web **document**. Our method also serves a pluggable extension-module for an application program by dynamic linking. A prototype system was implemented on our molecular structure viewer program, MOSBY, which successfully featured an extension-module for the docking study of molecular fragments from a web site. Our method is also applicable for wide range of network computations for private data processing using a Web **browser**. (Author abstract) 16 Refs.

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